

AN 2005:1130701 CAPLUS
DN 143:406594
TI Highly permeable swellable hydrogel-forming polymers containing
water-insoluble phosphates and dendritic polymers
IN Riegel, Ulrich; Daniel, Thomas; Weismantel, Matthias; Elliott, Mark;
Hermeling, Dieter
PA BASF Aktiengesellschaft, Germany
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005097881	A1	20051020	WO 2005-EP3009	20050322
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

	DE 102004015686	A1	20051027	DE 2004-102004015686	20040329
PRAI	DE 2004-102004015686	A	20040329		

AB A swellable polymeric hydrogel comprises by at least one
hydrophilic polymer with a dendritic structure and at
least one water-insol. phosphate. The dendritic polymer is used to fix
the water-insol. phosphate on the swellable polymeric hydrogel particles
considerably reducing dusting properties. A method for producing
swellable polymeric hydrogels and their use in hygiene articles are
presented. Thus, ASAP 500Z ground hydrogel polymer was
surface-crosslinked using isopropanol-water mixture (30:70) and 0.085 % of
2-oxazolidinone at 175° for 120 min. The hydrogel polymer powder
containing 0.5 % of calcium triphosphate and 0.5 % of dendritic polymer
Boltorn H 40 showed improved anticaking properties and small amount of fines
in comparison to a sample based only on ASAP 500Z polymer, or samples
containing only calcium triphosphate, or only Boltorn H 40 additives.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:588719 CAPLUS
DN 143:116184
TI Nondusting swellable hydrogel-forming polymers.
IN Riegel, Ulrich; Daniel, Thomas; Weismantel, Matthias; Elliott, Mark;
Hermeling, Dieter
PA BASF Aktiengesellschaft, Germany
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005061014	A1	20050707	WO 2004-EP14396	20041217
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,				

MR, NE, SN, TD, TG

DE 10360394	A1	20050714	DE 2003-10360394	20031219
DE 102004005417	A1	20050818	DE 2004-102004005417	20040203
PRAI DE 2003-10360394	A	20031219		
DE 2004-102004005417	A	20040203		

AB Nondusting swellable hydrogel-forming polymers from **hydrophilic polymers** with dendritic structure such as (a) polyesters prepared from polyols and 2,2-dimethylolpropionic acid, (b) polypropyleneimines, (c) polyamidoamines, or (d) polyester-polyamides containing microspheres from pyrogenic SiO₂, polysaccharides and surface-crosslinked using a mixture of isopropanol and water are used as absorbents for water and aqueous solns. such as blood and urine. Thus, heating a water-swellaable polymer (ASAP 500 Z) containing 3.16 weight% of a mixture isopropanol/water (3:7) and 0.085 weight% of 2-oxazolidinone 120 min at 175° gave a nondusting polymer having (after milling to particle size <10 µm) an absorption at 4,830 Pa s 23.3 g/g.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1

AN 2004:861398 CAPLUS

DN 142:38841

TI Study of Self-Diffusion of Hyperbranched Polyglycidols in Poly(vinyl alcohol) Solutions and Gels by Pulsed-Field Gradient NMR Spectroscopy

AU Baille, W. E.; Zhu, X. X.; Fomine, S.

CS Departement de Chimie, Universite de Montreal, Montreal, QC, H3C 3J, Can.

SO Macromolecules (2004), 37(23), 8569-8576

CODEN: MAMOBX; ISSN: 0024-9297

PB American Chemical Society

DT Journal

LA English

AB In an effort to further understand the effects of mol. size and shape of macromol. diffusants on the diffusion in **hydrophilic polymer** solns. and gels, hyperbranched polyglycidols have been synthesized as hydrophilic diffusants and characterized. Four of these hyperbranched polymers were selected for the study of self-diffusion by pulsed-field gradient NMR spectroscopy in poly(vinyl alc.)-water systems. The effects of the mol. weight, size, and shape of the diffusant, polymer concentration, and temperature have been studied. For diffusants of similar mol. weight and without specific interactions, the activation energy decreases from the **dendrimers** to hyperbranched polymers and then to linear polymers. The results indicate that the mol. shape, and hence the mol. d. distribution of the diffusants, is important in the diffusion process.

RE.CNT 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 12 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN

AN 2004:537348 SCISEARCH

GA The Genuine Article (R) Number: 826MO

TI Destabilization of liposomes by uncharged hydrophilic and amphiphilic polymers

AU Zhang L; Peng T; Cheng S X (Reprint); Zhuo R X

CS Wuhan Univ, Dept Chem, Key Lab Biomed Polymers, Minist Educ, Wuhan 430072, Peoples R China (Reprint)

CYA Peoples R China

SO JOURNAL OF PHYSICAL CHEMISTRY B, (10 JUN 2004) Vol. 108, No. 23, pp. 7763-7770.

ISSN: 1520-6106.

PB AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA.

DT Article; Journal

LA English

REC Reference Count: 26

ED Entered STN: 2 Jul 2004

Last Updated on STN: 2 Jul 2004

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The destabilization effect of a **hydrophilic polymer**, poly-alpha,beta-[N-(2-hydroxyethyl)-L-aspartamide] (PHEA), and an amphiphilic polymer, PHEA-g-poly(2,2-dimethyltrimethylene carbonate)

(PHEA-g-PDTC), on phosphatidylcholine vesicles has been investigated. The **hydrophilic polymer** PHEA has a strong destabilizing effect on the liposomes and induces immediate vesicular membrane leakage and aggregation, while the destabilizing effect of the amphiphilic polymer PHEA-g-PDTC is weaker. The in situ observation on shape transformations of a vesicle indicates that the addition of PHEA increases the amplitudes of fluctuations of the vesicle membrane, finally leading to the burst of the vesicle. The existence of hydrogen bonding between the polymers and the liposome membranes is mainly responsible for inducing the destabilization. The molecular structure of the polymers, such as the stiffness of the polymer backbone and the spacer connecting the hydroxyl group with the backbone, greatly affects the interaction between the polymers and the vesicles.

L6 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
 AN 2003:232348 CAPLUS
 DN 138:326996
 TI Heterojunction of organic molecules and metal oxide thin films
 AU Ichinose, Izumi; Kunitake, Toyoki
 CS Frontier Res. System, RIKEN, Wako, 351-0198, Japan
 SO Oyo Butsuri (2003), 72(3), 304-310
 CODEN: OYBSA9; ISSN: 0369-8009
 PB Oyo Butsuri Gakkai
 DT Journal; General Review
 LA Japanese
 AB A review. The surface sol-gel process is a preparation technique of mol.-thick metal oxide films by repeated chemisorption of alkoxides from solns. followed by hydrolysis. The resulting amorphous and low-d. films exhibit affinity for organic mols., enough to provide various heterointerfaces via coordinate bonding, hydrogen bonding, and electrostatic interaction. The process is also feasible for preparing organic-inorg. nanocomposite films, which become nanoporous oxide films after removal of organic components by O plasma discharge. Ultrathin oxide films covered with **hydrophilic polymers** are superior supports for water-soluble proteins. Herein nano-organized films of metal oxides containing polymers and biomols. are demonstrated and their chemical and engineering applications are overviewed.

L6 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
 AN 2002:826358 CAPLUS
 DN 138:90095
 TI Functionalization of carbon material by surface grafting of polymers
 AU Tsubokawa, Norio
 CS Department of Material Science and Technology, Faculty of Engineering, Niigata University, Niigata, 950-2181, Japan
 SO Bulletin of the Chemical Society of Japan (2002), 75(10), 2115-2136
 CODEN: BCSJA8; ISSN: 0009-2673
 PB Chemical Society of Japan
 DT Journal; General Review
 LA English
 AB A review. Recent advances in surface grafting of polymers onto carbon materials, such as carbon black, graphite powder, and carbon fibers, and applications of polymer-grafted carbon functional materials are discussed. Grafting of polymers onto carbon surfaces is achieved by grafting-onto process, grafting-from process, polymer reaction process, and stepwise growth by **dendrimer** synthesis methodol. Surface functional groups, such as carboxyl and phenolic hydroxy groups are used as grafting sites. For example, in the living cationic polymerization initiated by carbon black/ZnCl₂ system, carboxyl groups on the surface act as initiator and grafting site. In surface grafting, polycondensed aromatic rings of carbon materials are used as grafting sites via ligand exchange reactions of polymers containing ferrocene moieties. By grafting of polymers onto carbon black surfaces, dispersibility in solvents and surface wettability are readily controlled by pH and temperature. By post-grafting of **hydrophilic polymers** to a grafted hydrophobic chain on carbon black, amphiphilic carbon black was obtained. The crystalline polymer-grafted carbon black gas sensor material and a pos. temperature coefficient material are described.

RE.CNT 138 THERE ARE 138 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 12 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on
STN
AN 2002:329537 SCISEARCH
GA The Genuine Article (R) Number: 541EL
TI Block copolymer micelles for delivery of gene and related compounds
AU Kakizawa Y; Kataoka K (Reprint)
CS Univ Tokyo, Grad Sch Engn, Dept Mat Sci, Bunkyo Ku, 7-3-1 Hongo, Tokyo
1138656, Japan (Reprint); Univ Tokyo, Grad Sch Engn, Dept Mat Sci, Bunkyo
Ku, Tokyo 1138656, Japan
CYA Japan
SO ADVANCED DRUG DELIVERY REVIEWS, (21 FEB 2002) Vol. 54, No. 2, pp. 203-222.
ISSN: 0169-409X.
PB ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS.
DT General Review; Journal
LA English
REC Reference Count: 97
ED Entered STN: 3 May 2002
Last Updated on STN: 3 May 2002

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Block copolymers composed of a cationic segment and a hydrophilic
segment spontaneously associate with polyanionic DNA to form block
copolymer micelles. The distinct feature of the associate is that the
core of the polyion complex between DNA and the polycation is coated by a
layer of the **hydrophilic polymer**. The characteristic
core-shell structure endows the associate with a high colloidal stability
and reduced interaction with blood components. These desirable properties
are the major advantages of the micellar DNA delivery system for in vivo
application. In this article, the synthesis of block copolymers as well
as graft copolymers utilized as DNA delivery systems are described.
Particular emphasis is devoted to the association behavior and the
physicochemical properties of polyion complex micelles entrapping DNA and
related substances in relation to the biological aspects of the
associates. Biodistribution and the factors that affect the intracellular
fate of the micelles is also addressed based on recent studies in this
field. (C) 2002 Elsevier Science B V All rights reserved.

L6 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:747300 CAPLUS
DN 135:291393
TI Polyolefin nonwoven fabrics for battery separators and batteries
IN Aizawa, Wakana; Miura, Hidetoshi; Hyodo, Kenji
PA Mitsubishi Paper Mills, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001283813	A2	20011012	JP 2000-92331	20000329
PRAI	JP 2000-92331		20000329		

AB The separators are made of nonwoven fabrics comprising ≥ 1
polyolefin fibers and have coatings of hydrophilic group-containing
super-branched polymers, e.g. **dendrimers**. Batteries equipped
with the above stated separators are also claimed. The batteries have
excellent self discharge inhibiting characteristics.

L6 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
AN 2001:149765 CAPLUS
DN 134:341113
TI Nanoparticle Formation within **Dendrimer**-Containing Polymer
Networks: Route to New Organic-Inorganic Hybrid Materials
AU Groehn, Franziska; Kim, Ginam; Bauer, Barry J.; Amis, Eric J.
CS Polymers Division, National Institute of Standards and Technology,
Gaithersburg, MD, 20899, USA
SO Macromolecules (2001), 34(7), 2179-2185
CODEN: MAMOBX; ISSN: 0024-9297
PB American Chemical Society

DT Journal
LA English
AB Higher generation poly(amidoamine) (PAMAM) **dendrimers** have the unique ability to act as templates for the formation of inorg. nanoclusters. Here, we use **dendrimers** dispersed in a polymer matrix to create a new type of polymer-inorg. composite material. **Hydrophilic polymer** networks (poly(2-hydroxyethyl methacrylate)) that contain poly(amidoamine) **dendrimers** were swollen in aqueous solution, and metal ions were attached to the **dendrimers**. Chemical reduction on these precursor ions results in nanoparticles that are located inside the **dendrimers**, which are dispersed in the polymer matrix. Small-angle X-ray scattering (SAXS) and transmission electron microscopy (TEM) were used to characterize gold, platinum, and copper nanoclusters within the polymer networks. These new organic-inorg. hybrid materials may be important for a combination of optical or catalytic properties of the colloids with the mech. properties provided by the polymer network. x-ray scattering.

RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 10 OF 12 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
AN 2001161276 EMBASE
TI Cationic polymers for gene delivery: Designs for overcoming barriers to systemic administration.
AU Hwang S.J.; Davis M.E.
CS S.J. Hwang, Insert Therapeutics Inc, 2585 Nina St, Pasadena, CA 91107, United States. shwang@insertt.com
SO Current Opinion in Molecular Therapeutics, (2001) Vol. 3, No. 2, pp. 183-191. .
Refs: 71
ISSN: 1464-8431 CODEN: CUOTFO
CY United Kingdom
DT Journal; Article
FS 037 Drug Literature Index
039 Pharmacy
LA English
SL English
ED Entered STN: 17 May 2001
Last Updated on STN: 17 May 2001
AB Cationic, polymer-based delivery systems have faced limitations in the systemic delivery of therapeutic gene drugs due to difficulties in formulation, in vivo stabilization, toxicity and low transfection efficiencies. Strategies for overcoming some of these barriers have utilized knowledge gained from the fields of colloidal stabilization and protein trafficking. This review highlights recent efforts in polycation preparations that include the development of new polymers for gene delivery, the modification of traditional polycations with **hydrophilic polymers** for salt and serum stability and the addition of bioactive functionalities to polymers for enhanced intracellular trafficking. These studies have resulted in polymer/DNA composites with increased stability and delivery efficiencies.

L6 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2001:203740 CAPLUS
TI Nanoparticle formation within **dendrimer**-containing polymer networks: Route to new organic-inorganic hybrid materials
AU Grohn, Franziska; Bauer, Barry J.; Kim, Ginam; Amis, Eric J.
CS Polymers Division, National Institute of Standards and Technology, Gaithersburg, MD, 20899, USA
SO Abstracts of Papers, 221st ACS National Meeting, San Diego, CA, United States, April 1-5, 2001 (2001) PMSE-043
CODEN: 69FZD4
PB American Chemical Society
DT Journal; Meeting Abstract
LA English
AB Higher generation polyamidoamine (PAMAM) **dendrimers** have the unique ability to act as templates for the formation of inorg. nanoclusters. Here, we use **dendrimers** dispersed in a polymer

matrix to create a new type of polymer-inorg. composite material. **Hydrophilic polymer** networks (poly(2-hydroxyethyl methacrylate)) that contain polyamidoamine **dendrimers** were swollen in aqueous solution and metal ions were attached to the **dendrimers**. Chemical reduction on these precursor ions results in nanoparticles that are located inside the **dendrimers**, which are dispersed in the polymer matrix. Small angle x-ray scattering (SAXS) and transmission electron microscopy (TEM) were used to characterize gold, platinum and copper nanoclusters within the polymer networks. These new organic-inorg. hybrid materials may be important for a combination of optical or catalytic properties of the colloids with the mech. properties provided by the polymer network.

L6 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1994:701522 CAPLUS

DN 121:301522

TI Hydraamphiphiles: Novel Linear Dendritic Block Copolymer Surfactants

AU Chapman, Toby M.; Hillyer, Gregory L.; Mahan, Eric J.; Shaffer, Katherine A.

CS Department of Chemistry, University of Pittsburgh, Pittsburgh, PA, 15260, USA

SO Journal of the American Chemical Society (1994), 116(24), 11195-6

CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

AB Four generations of dendritic poly(α , ϵ -L-lysine) are elaborated onto 5000 mol. weight poly(ethylene oxide) which function as a polymer support in facilitating the synthesis. Products are isolated by precipitation in ether. The generation four polymer retaining 16 terminal tert-butyloxycarbonyl protecting groups is a surfactant which gives temporally stable foams when shaken in water. It is dissolved in water by sonication and lowers the surface tension to 38.3-38.7 dynes/cm demonstrating a critical micelle concentration at 8×10^{-5} M. The solns. solubilize the dye Orange-OT at concns. above, but not below approx. 10^{-5} M. The amount of dye solubilized increases as the concentration of surfactant polymer increases; however, the amount per g of polymer rises as the concentration decreases. This ratio suddenly falls to near zero at the concentration where dye solubilization ends. These biodegradable polymeric surfactants have 3 sep. sections: a **hydrophilic polymer** tail, a polar **dendrimer**, and hydrophobic termini.